

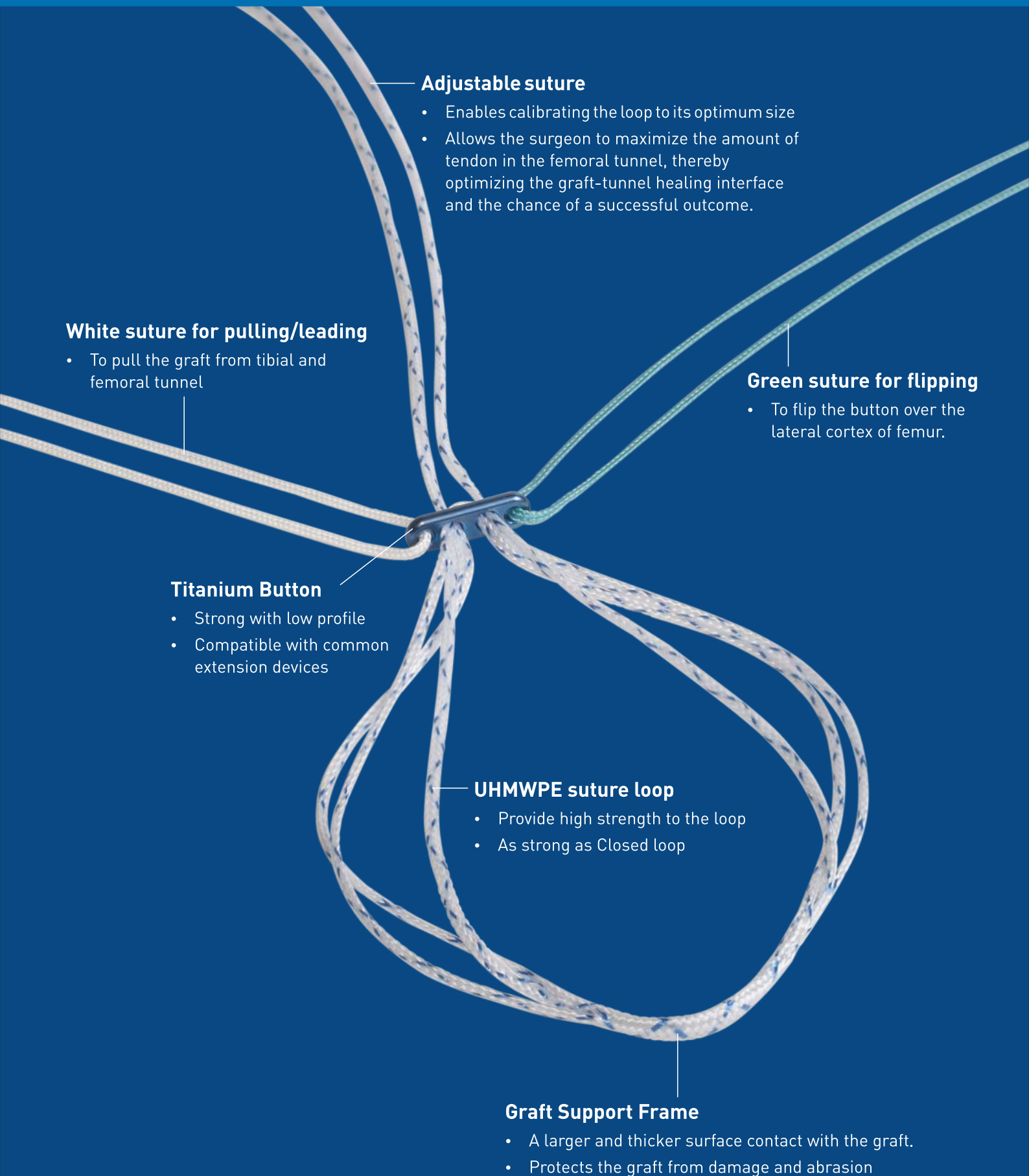
For ACL Reconstruction

BUTTONFIX[®]

Fixation Button with Adjustable Loop



Technique Guide



Adjustable suture

- Enables calibrating the loop to its optimum size
- Allows the surgeon to maximize the amount of tendon in the femoral tunnel, thereby optimizing the graft-tunnel healing interface and the chance of a successful outcome.

White suture for pulling/leading

- To pull the graft from tibial and femoral tunnel

Green suture for flipping

- To flip the button over the lateral cortex of femur.

Titanium Button

- Strong with low profile
- Compatible with common extension devices

UHMWPE suture loop

- Provide high strength to the loop
- As strong as Closed loop

Graft Support Frame

- A larger and thicker surface contact with the graft.
- Protects the graft from damage and abrasion

Technique Guide



Figure 1

Graft Harvest and Preparation

An incision is made over the insertion site of the semi tendinosis and gracilis tendons. The tendons are identified and whip-stitched. Care is taken to free the tendons of any distal attachments that might cause early truncation of the tendons during harvesting.



Figure 2

A tendon stripper- Open end/Closed end (BAK-7071.06, BAK-7071.07, BAK-7071.08, BAK-7073.06, BAK-7073.07, BAK-7073.08) is placed over each tendon and carefully advanced towards the musculotendinous junction. Firm counter-pressure is maintained while advancing the tendon stripper until the tendon is released from its muscular attachment.



Figure 3

The tendons are brought to the graft prep station (BAK-7069) where they are inspected and stripped of any remaining muscle.



Figure 4

The ends of the tendons that were stripped from the musculotendinous junction are now whip-stitched using BioFiber[®] (BF-2W / BF-2WC / BF-2WK / BF-2WCK / BF-WWB) or BioFiber[®] loop (BF-2WSB)

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Figure 5

The ends of the graft are now passed through the suture loops of the BUTTONFIX[®] (BAK-7195).



Figure 6

The prepared graft is passed through the graft sizing block (BAK-7070/BAK-7124) to determine diameter of the graft.



Figure 7

The ends of the tendons are evened out and the graft is placed on a graft prep station for tensioning.

Later, when you know your total transosseous femoral length, you can mark your suture loops at the corresponding depth as a visual clue as to when the button is expected to flip.

Attention is now turned back to tunnel creation while the graft is being tensioned.

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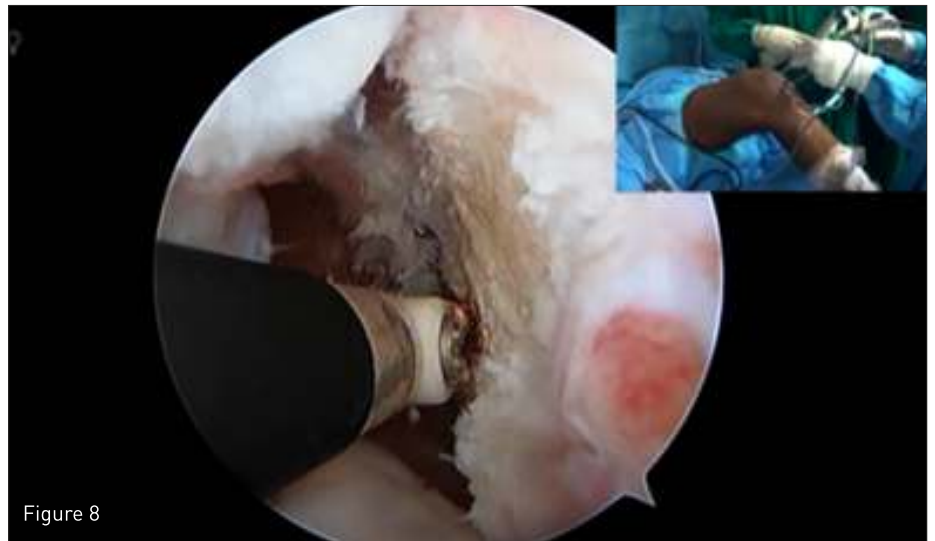
Femoral Tunnel Drilling

A medial portal is created that gives access to the anatomic attachment of the ACL on the lateral wall of the femoral notch. The correct tunnel site can be created using remnants of the ruptured ACL or by using reproducible anatomic landmarks such as the bifurcate ridge or distance from the articular cartilage or posterior aspect of the lateral wall.

The ACL remnant is removed from the notch usually with a shaver and/or a radiofrequency ablation device while noting the anatomic footprint on the femoral and tibial side for later reconstruction

Leave a small portion of the footprint intact to permit proper identification of the ACL origin and insertion

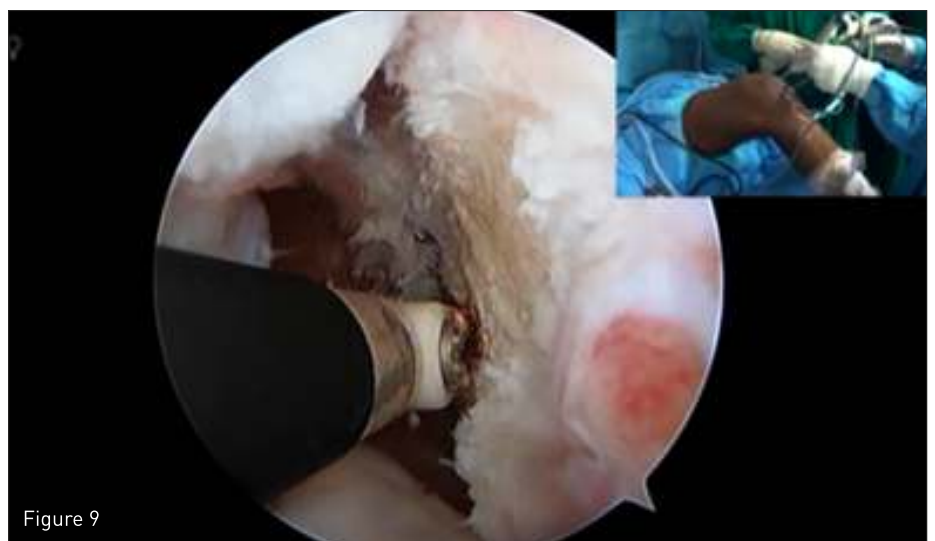
Care is taken not to injure the PCL.



A notchplasty can be performed using notchplasty curette if needed using a large shaver or a burr.

A landmark called, Residents Ridge, can be used to identify the anatomical placement of the ACL footprint on the Femur. Residents Ridge represents the anterior aspect of the ACL insertion on the femur.

Insert LOCUS Transportal Femoral Aimer (BAK-7055.05/ BAK-7055.06/ BAK-7055.07) through medial portal and put the tip of aimer on the femoral attachment site of ACL or where the you want to drill. Advance Graft passing pin or beath pin dia. 2.4mm (BAK-7037/ BAK-7116/ BAK-7203) through the LOCUS Transportal Femoral Aimer and drill through the lateral cortex.



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Remove LOCUS Transportal Femoral Aimer and drill with cannulated endoscopic reamer, Dia. 4.7mm (BAK-7118) over beath pin.

Measure the total transosseous femoral tunnel length by hooking depth gauge (BAK-7053).

Mark the suture loops according to the total femoral tunnel length. This mark signals when the button is ready to be flipped.



Figure 10



Figure 11



Figure 12

Ream the femoral socket

Pass the appropriate size FLOWERTIP[®] Femoral Reamer (BAK-7045.60 / BAK-7045.65 / BAK-7045.70 / BAK-7045.75 / BAK-7045.80 / BAK-7045.85 / BAK-7045.90 / BAK-7045.95 / BAK-7045.10 / BAK-7045.105 / BAK-7045.11 / BAK-7045.115 / BAK-7045.12) (e.g., 9 mm) over the beathpin and ream to the desired depth making sure to keep the femoral cortex intact. Then pass a looped free suture through the femoral tunnel that will be used to shuttle the graft into the femoral socket later in the procedure

Technique Guide



Figure 13

Mark the graft according to the socket depth. When this mark is flush with the tunnel aperture, the graft has completely filled the socket

Tip: Mark the graft 5mm shorter than the socket depth. When this mark reaches the tunnel aperture, you can stop tensioning. The 5mm is left for tension post tibial fixation. Insert your tibial screw and then tension the graft the rest of the 5mm to get the perfect tension on the graft.

Tibial Tunnel Drilling

Use a 2.4mm drill bit passing pin and ONLoc[®] tibial drill guide system (BAK-7035-3 / BAK-7035-4) to create an anatomic tibial tunnel with Drill Bit Passing Pin (BAK-7036). Remnants of the tibial attachment of the ACL can be used as a reference as well as the anterior horn of the lateral meniscus.

Remove drill guide with angled bullet and let drill bit passing pin remain on its place.

Once the Drill Bit Passing Pin has been placed, over-ream with the appropriate sized CANNUDRILL[®] Tibial Reamer (BAK-7038.60 / BAK-7038.65 / BAK-7038.70/BAK-7038.75 / BAK-7038.80 / BAK-7038.85 / BAK-7038.90 / BAK-7038.95 / BAK-7038.10/ BAK-7038.105 / BAK-7038.11/BAK-7038.115).

Place a suture retriever/hook into the tibial tunnel and retrieve the loop of suture that was previously left exiting the femoral socket into the joint. You will now have one continuous passing suture from the tibial tunnel into the joint and out the femoral tunnel



Figure 14



Figure 15



Figure 16

Technique Guide

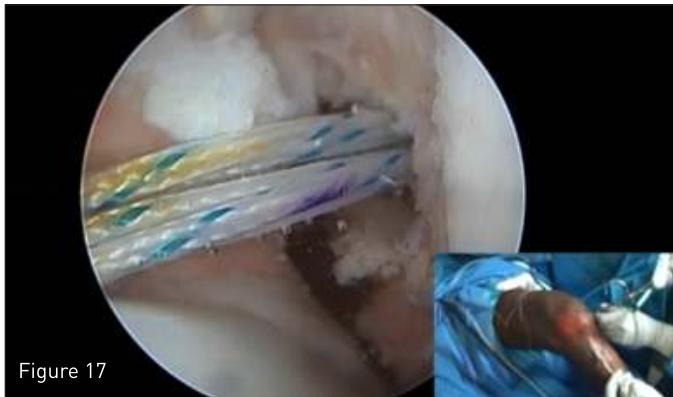


Figure 17

Graft Insertion

Pull suture tails through the tunnels

Place about 3" to 4" of the implant's suture tails through the passing loop. Pull the suture tails through the tibial and femoral tunnels and out through the thigh.

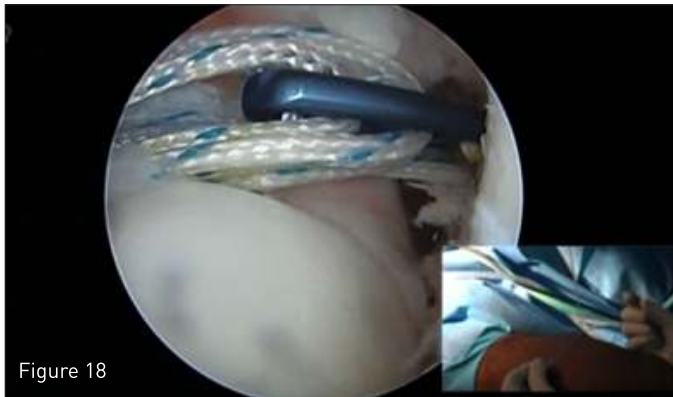


Figure 18

Pull on white leading suture to advance the implant/graft construct through the tibial tunnel and into the joint space. Remove any slack from the remaining sutures as you advance the construct.



Figure 19

Flip the button with the green suture: watch for the markings on the suture loops as they approach the aperture which will indicate that the button is ready to be flipped. Pull on the green suture to flip the button.

Firmly pull on the distal graft to confirm the button is on the femoral cortex.



Figure 20

Pull on the adjustment (white/blue) suture to adjust the suture loops and advance the graft into the femoral socket. Pull proximally, in line with the graft. When the graft markings are flush with the aperture, the graft has completely filled the socket.



Figure 21

Final Fixation

Remove excess laxity of loops by doing the following:

- Firmly pull on the tibial graft ends
- Cycle the knee

Complete tibial side fixation by putting guide wire (BAK-7120 / BAK-7191 / BAK-7180 / BAK-7183) inside the tibial tunnel and insert SOFTFIX[®] / SOFTFIX-PK[®] / BIOTWIN[™]

interference screw over this guide wire and screw in screw with screw driver (BAK-7063 / BAK-7161 / BAK-7197) (this may be done at this point or after re-tensioning)

- Re-tension the adjustment suture of BUTTONFIX[®]. Cut the sutures after tibial fixation is completed

Remove pulling and flipping suture on femur side by just pulling it. Cut the adjustment suture with the help of suture cutter or scissors.

Ordering information

Catalog No.	Product Description
BAK-7195	BUTTONFIX [®] Fixation Button with Adjustable Loop
BF-2W	BioFiber [®] Fiber USP Size 2 with MO-6 needle White, Len. 36"
BF-2WC	BioFiber [®] Fiber USP Size 2 with MO-6 needle White-Blue, Len. 36"
BF-2WK	BioFiber [®] Fiber USP Size 2 with MO-6 needle White-Black, Len. 36"
BF-2WCK	BioFiber [®] Fiber USP Size 2 with MO-6 needle White-Blue-Black, Len. 36"
BF-WWB	BioFiber [®] Fiber USP Size 2, Len. 36" Pack contains 2 units (White with needle & White-Blue with needle)
BF-2WSB	BioFiber [®] Fiber Loop, Size 2 with straight needle, Len. 6cm White-Blue, Len. 24"
BAK-7165.23	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 6.0mm, Len. 23mm, PEEK
BAK-7166.23	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 7.0mm, Len. 23mm, PEEK
BAK-7166.28	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 7.0mm, Len. 28mm, PEEK
BAK-7167.23	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 8.0mm, Len. 23mm, PEEK
BAK-7167.28	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 8.0mm, Len. 28mm, PEEK
BAK-7168.23	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 9.0mm, Len. 23mm, PEEK
BAK-7168.28	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 9.0mm, Len. 28mm, PEEK
BAK-7168.35	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 9.0mm, Len. 35mm, PEEK
BAK-7169.28	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 10.0mm, Len. 28mm, PEEK
BAK-7169.35	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 10.0mm, Len. 35mm, PEEK
BAK-7170.35	SOFTFIX-PK [®] Interference screw, cannulated, roundhead; Dia. 11.0mm, Len. 35mm, PEEK
BAK-7128.20S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 7.0mm, Len. 20mm, Titanium
BAK-7128.25S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 7.0mm, Len. 25mm, Titanium
BAK-7128.30S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 7.0mm, Len. 30mm, Titanium
BAK-7101.20S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 8.0mm, Len. 20mm, Titanium
BAK-7101.25S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 8.0mm, Len. 25mm, Titanium
BAK-7101.30S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 8.0mm, Len. 30mm, Titanium
BAK-7102.20S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 9.0mm, Len. 20mm, Titanium
BAK-7102.25S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 9.0mm, Len. 25mm, Titanium
BAK-7102.30S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 9.0mm, Len. 30mm, Titanium
BAK-7114.20S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 10.0mm, Len. 20mm, Titanium
BAK-7114.25S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 10.0mm, Len. 25mm, Titanium
BAK-7114.30S	SOFTFIX [®] Interference screw, cannulated, roundhead, Dia. 10.0mm, Len. 30mm, Titanium
BT11CPVI0720	BIOTWIN [™] Composite Interference Screw 7x20mm
BT08CPVI0725	BIOTWIN [™] Composite Interference screw 7x25mm
BT08CPVI0730	BIOTWIN [™] Composite Interference screw 7x30mm
BT11CPVI0820	BIOTWIN [™] Composite Interference screw 8x20mm
BT08CPVI0825	BIOTWIN [™] Composite Interference screw 8x25mm
BT08CPVI0830	BIOTWIN [™] Composite Interference screw 8x30mm
BT11CPVI0920	BIOTWIN [™] Composite Interference screw 9x20mm
BT08CPVI0925	BIOTWIN [™] Composite Interference screw 9x25mm
BT08CPVI0930	BIOTWIN [™] Composite Interference screw 9x30mm
BT12CPVI1025	BIOTWIN [™] Composite Interference screw 10x25mm
BT08CPVI1030	BIOTWIN [™] Composite Interference screw 10x30mm
BT15CPVI1135	BIOTWIN [™] Composite Interference screw 11x35mm



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